

II. CLAIM AMENDMENTS

1. (Previously presented) An envelope elimination and restoration linear amplifier comprising

an envelope detector configured to detect an envelope component from an input modulated signal for output along a first forward path;

a separator configured to separate an input modulated signal into an envelope component and a phase component for output along respective first and second forward paths, the second forward path being separate from said first forward path;

an amplifying part arranged to generate an output signal based on said envelope component and said phase component; and

an envelope control loop including a feedback path, wherein the gain of said feedback path is variable for controlling the gain of the amplifier.

2. (Previously presented) An amplifier according to claim 1, wherein said feedback path includes a downconverter for downconverting the frequency of the feedback signal therein.

3. (Previously presented) An amplifier according to claim 2, wherein said feedback path includes a gain controller before the downconverter.

4. (Original) An amplifier according to claim 1, including a phase control loop.

5. (Previously presented) An amplifier according to claim 4, wherein said feedback path includes a downconverter for downconverting the frequency of the feedback signal therein.
6. (Previously presented) An amplifier according to claim 5, wherein said feedback path includes gain control means before the downconverter.
7. (Original) An amplifier according to claim 1, wherein said feedback path is shared by the envelope control and phase control loops.
8. (Previously presented) An amplifier according to claim 7, wherein said feedback path includes a downconverter for downconverting the frequency of the feedback signal therein.
9. (Previously presented) An amplifier according to claim 8, wherein said feedback path includes a gain controller before the downconverter.
10. (Original) An amplifier according to claim 1, wherein the gain of the feedback path is electronically controllable.
11. (Original) An amplifier according to claim 10, wherein the feedback path comprises variable gain means responsive to a control signal to set its gain.

12. (Previously presented) A communications device including a RF power amplifier according to claim 10.

13. (Previously presented) A communications device including a RF power amplifier according to claim 11.

14. (Previously presented) A communications device according to claim 12, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.

15. (Previously presented) A communications device according to claim 13, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.

16. (Previously presented) A communications device according to claim 12, including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

17. (Previously presented) A communications device according to claim 13, including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the

input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

18. (Previously presented) An envelope elimination and restoration linear amplifier comprising:

an envelope detector configured to detect an envelope component from an input modulated signal for output along a first forward path;

a separator configured to separate an input modulated signal into an envelope component and a phase component for output along respective first and second forward paths, the second forward path being separate from said first forward path;

an amplifying part arranged to generate an output signal based on said envelope component and said phase component; and

an envelope control loop including a feedback path, wherein the gain of said feedback path is variable for controlling the gain of the amplifier and said feedback path includes a downconverter for downconverting the frequency of the feedback signal therein.

19. (Previously presented) An amplifier according to claim 18, wherein said feedback path includes a gain controller before the downconverter.

20. (Original) An amplifier according to claim 18, including a phase control loop.

21. (Previously presented) An amplifier according to claim 20, wherein said feedback path includes a gain controller before the downconverter.
22. (Original) An amplifier according to claim 18, wherein said feedback path is shared by the envelope control and phase control loops.
23. (Previously presented) An amplifier according to claim 22, wherein said feedback path includes a gain controller before the downconverter.
24. (Original) An amplifier according to claim 18, wherein the gain of the feedback path is electronically controllable.
25. (Original) An amplifier according to claim 24, wherein the feedback path comprises variable gain means responsive to a control signal to set its gain.
26. (Previously presented) A communications device including a RF power amplifier according to claim 24.
27. (Previously presented) A communications device including a RF power amplifier according to claim 25.
28. (Previously presented) A communications device according to claim 26, including a controller for determining a desired

output power and providing a corresponding control signal to the amplifier.

29. (Previously presented) A communications device according to claim 27, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.

30. (Previously presented) A communications devices according to claim 26, including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

31. (Previously presented) A communications devices according to claim 27, including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

32. (Previously presented) An envelope elimination and restoration linear amplifier comprising:

an envelope detector configured to detect an envelope component from an input modulated signal for output along a first forward path;

a separator configured to separate an input modulated signal into an envelope component and a phase component for output along respective first and second forward paths, the second forward path being separate from said first forward path;
an amplifying part arranged to generate an output signal based on said envelope component and said phase component; and
an envelope control loop including a feedback path, wherein the gain of said feedback path is variable for controlling the gain of the amplifier, said feedback path includes a downconverter for downconverting the frequency of the feedback signal therein and said feedback path includes a gain controller before the downconverter.

33. (Original) An amplifier according to claim 32, including a phase control loop.

34. (Original) An amplifier according to claim 33, wherein said feedback path is shared by the envelope control and phase control loops.

35. (Original) An amplifier according to claim 32, wherein the gain of the feedback path is electronically controllable.

36. (Original) An amplifier according to claim 35, wherein the feedback path comprises variable gain means responsive to a control signal to set its gain.

37. (Previously presented) A communications device including a RF power amplifier according to claim 35.
38. (Previously presented) A communications device including a RF power amplifier according to claim 36.
39. (Previously presented) A communications device according to claim 37, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.
40. (Previously presented) A communications device according to Claim 38, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.
41. (Previously presented) A communications device according to claim 37, including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.
42. (Previously presented) A communications devices according to claim 38, including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the

input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

43. (Previously presented) An envelope elimination and restoration linear amplifier comprising:

an envelope detector configured to detect an envelope component from an input modulated signal for output along a first forward path;

a separator configured to separate an input modulated signal into an envelope component and a phase component for output along respective first and second forward paths, the second forward path being separate from said first forward path;

an amplifying part arranged to generate an output signal based on said envelope component and said phase component; and

an envelope control loop including a feedback path and a phase control loop, wherein the gain of said feedback path is variable for controlling the gain of the amplifier, said feedback path includes a downconverter for downconverting the frequency of the feedback signal therein, said feedback path includes a gain controller before the downconverter, and said feedback path is shared by the envelope control and phase control loops.

44. (Original) An amplifier according to claim 43, wherein the gain of the feedback path is electronically controllable.

45. (Original) An amplifier according to claim 44, wherein the feedback, path comprises variable gain means, responsive to a control signal to set its gain.

46. (Previously presented) A communications device including a RF power amplifier according to claim 44.

47. (Previously presented) A communications device including a RF power amplifier according to claim 45.

48. (Previously presented) A communications device according to claim 44, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.

49. (Previously presented) A communications device according to claim 45, including a controller for determining a desired output power and providing a corresponding control signal to the amplifier.

50. (Previously presented) A communications devices according to claim 46,

including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

51. (Previously presented) A communications device according to claim 47,

including a predistortion circuit for predistorting an input signal to compensate for signal distortion in the amplifier, the output of the predistortion circuit forming the input for the amplifier, wherein the predistortion applied by the predistortion circuit is independent of the gain of the amplifier.

52-59. (Canceled)